Working With Maltreated Children
A Neurodevelopmental Perspective

Delaware Judicial Education Program
2002

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www.ChildTrauma.org

ChildTrauma Web Site

www.ChildTrauma.org

Online University

www.ChildTraumaAcademy.com

Additional materials

www.scholastic.com/bruceperry

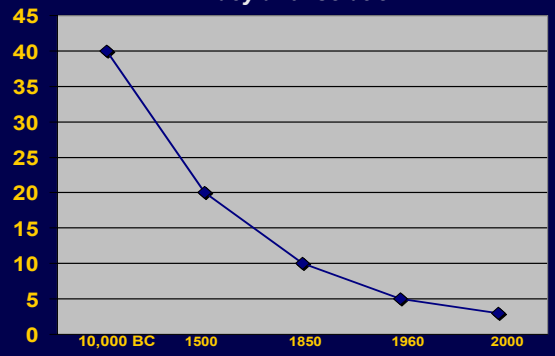
The best time to influence the character of a child is 100 years before they are born.

W.R. Inge

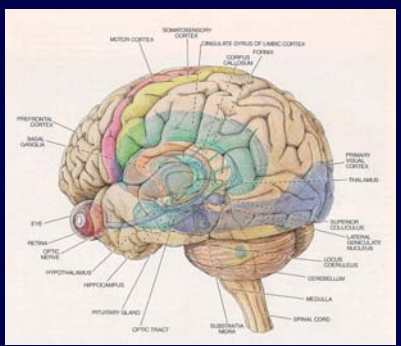
We live in a child-illiterate society.

We have lost our efficient mechanisms for trans-generational passage of child-rearing beliefs and practices.

Decrease in the Size of "Households"
Privacy and Isolation

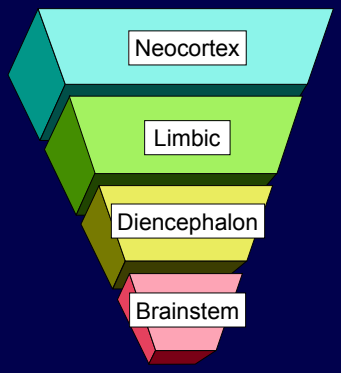


The brain allows us to absorb the accumulated and distilled experiences of thousands of previous generation - in a single lifetime.



The Brain Matters

- The human brain is the organ responsible for everything we do. It allows us to love, laugh, walk, talk, create or hate.
- The brain - one hundred billion nerve cells in a complex net of continuous activity - allows us our humanity.
- For each of us, our brain's functioning is a reflection of our experiences.



Abstract thought
Concrete Thought
Affiliation
"Attachment"
Sexual Behavior
Emotional Reactivity
Motor Regulation
"Arousal"
Appetite/Satiety
Sleep
Blood Pressure
Heart Rate
Body Temperature

Prime Directives of the Brain

Stay alive! - *Affiliate*

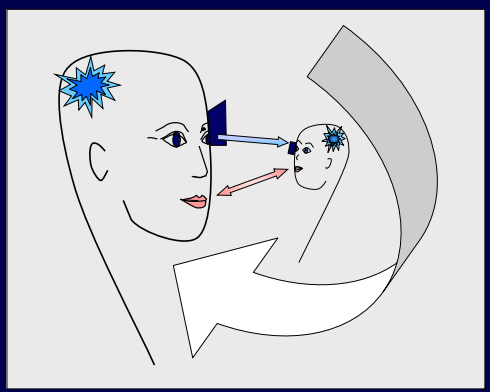
Procreate - *Affiliate*

Protect and nurture dependents - *Affiliate*

The biological unit of survival for human beings is the clan.

Evolutionary pressure which resulted in our species was applied to the clan, not the individual.

We are unavoidably inter-dependent upon each other.



Attachment and Reward Neural Systems are Inter-related

Humans feel pleasure in context of emotional relationships – this reinforces and strengthens our connections. *This "pleasure" helps promote and sustain healthy caregiving behaviors.*

Sociocultural Evolution

- Language
- Religion
- Childrearing Practices
- Family Structure
- Art, Science, Technology
- Cultural (Group) History
- Educational Practices
- "Values" and beliefs

Children and Experience

	Primary caretaker	*Family*	*Media (TV, CD)*	*Peer*	*School*
Infant	**80**	20	0	0	0
Toddler	**40**	30	20	5	5
Child	10	15	**30**	15	**30**
Adolescent	5	5	**30**	**25**	**35**

Sociocultural Devolution

- A transgenerational loss of cultural information' -- *CULTURAL "DNA"*
- This loss may or may not be accompanied by replacement with new cultural practices
- This may take place in isolated groups -- or in larger subcultures

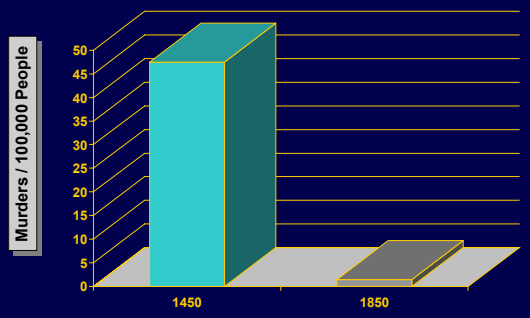
Vanishing Cultures

- 300 million (5% of Earth) live in indigenous culture
- 10,000 languages ever evolved
- 6000 spoken today
- Fewer than 300 spoken by more than 1 million people

Why Do We Kill?

Murder Rates: Amsterdam

1450 vs 1850



Humans have the *potential* to be violent but it is not inevitable. We also have the *potential* for remarkable humanity.

There is tremendous variability across cultures and over time in the level of violence in human living groups.

What Is *Social Fabric*?

- Common values, beliefs, language
- Respect and concern for each other
- Capacity to invest in and share with each other
- These are brain-mediated capabilities – the socio-emotional "glue" for a family, community and society

Deterioration of Social Fabric: Prelude to Violence

- Black Plague
- Destruction of small towns and farming families
- Economic and cultural disarray
- Survivors migrate to cities
- Unemployment, disconnection from community, hopelessness, alcohol

Violence, Suicide, Mental Illness, Physical Illness, and a Host of Social Ills Increase When Social Fabric Frays

When the fragile social and emotional bonds that keep human beings living and working together dissolve, we turn on each other.

Memory is the Key to Understanding Development

The sequential acquisition of various "memories" is the primary task of development.

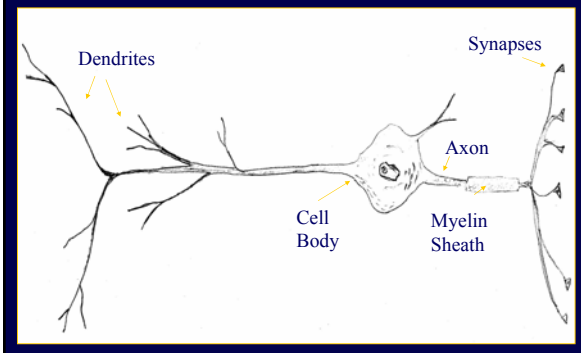
What is Memory ?

- The capacity to bring ***elements*** of an experience from one moment in time to another.
- This is the unique property of life forms.
- There are many ways that life forms do this - genes, immune system, nervous system
- Nervous tissue is ***designed*** to store elements of experience.

Translating Sensory Input into Patterned Neuronal Activity

- All neurons change their molecular functioning in a 'use' dependent fashion
- Therefore, patterned sensory input leads to patterned changes in neuronal systems
- Patterned neuronal changes allow the brain to make internal representations (changes) of the 'external' world

The Neuron



Neurons are designed to change!

From their "birth," neurons are continually changing – modifying their biochemistry and microstructure in response to a continuous and varied patterns of neurochemical stimulation.

USE-DEPENDENT DEVELOPMENT

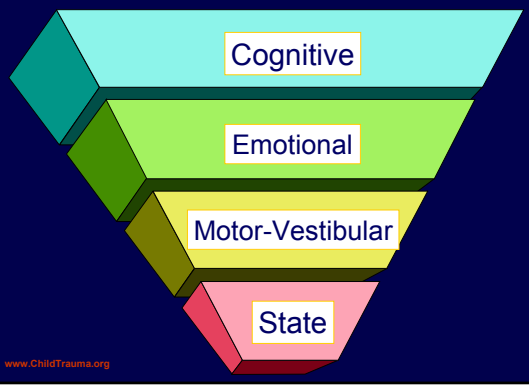
The more a neural system is "activated," the more that system changes to reflect that pattern of activation

This is the basis for development, memory and learning

Patterns and Organization of Brain Function

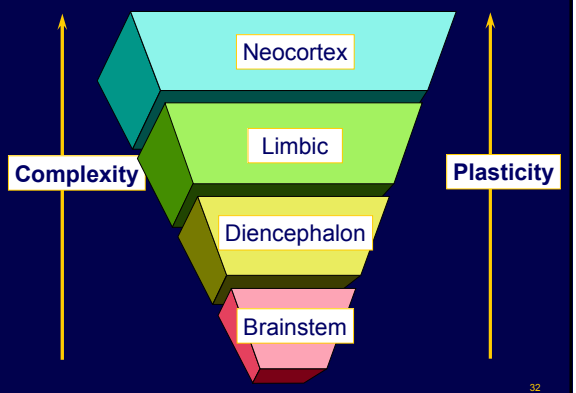
- Requires patterns to effectively develop and organize the brain
- With chaotic sensory input or inconsistent patterns of activity or sensory input, there are crucial dysfunctions

MEMORY



Changing the Brain

- The brain is always changing
- Plasticity is not uniform across all brain areas
- It takes less time, intensity and repetition to organize the developing neural systems than to re-organize the developed neural systems



Homeostasis and Memory

- When incoming sensory signals (sights, sounds, smells, taste) are familiar, the homeostasis of the brain is not altered.
- When an experience has unique patterns of sensory signal (and corresponding novel neurophysiological patterns) homeostasis is altered - creating and storing new templates.
- Altered homeostasis results in new templates of neural activity - memories.

Memory and Templates

- The brain matches all incoming sensory signals against previously-stored patterns.
- This matching begins at the first set of synaptic connections in the brainstem.
- Patterns of neural activity that are familiar are categorized
- Patterns that are novel cause arousal and focus attention -sometimes even alarm

The Brain does not like Surprises

- All novel stimuli activate “attention”.
- Novel stimuli, until proven otherwise, are categorized as potentially-threatening.
- New situations, new faces, new places - even when “fun” - activate a low-level arousal/stress response.

Association

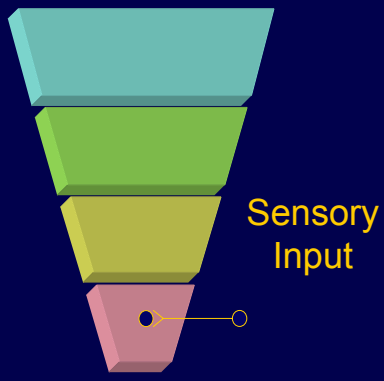
- The brain makes associations between sensory signals co-occurring in any given moment in time
- This capacity allows humans to learn, create images of the future and survive.
- This capacity can also make humans vulnerable to false associations - creating fears of non-threatening objects.

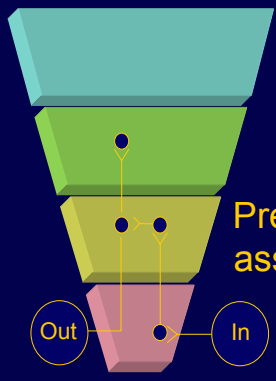
From Specific to General

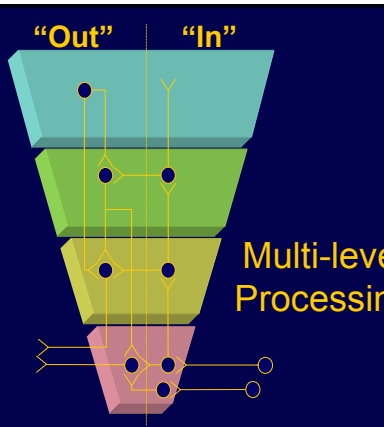
- The brain takes associations from a single or specific event and generalizes to other situations.
- The brain can generalize from the single abusive father to all adult males.
- This process, generalization, can literally alter the way future experiences are sensed, perceived and processed.

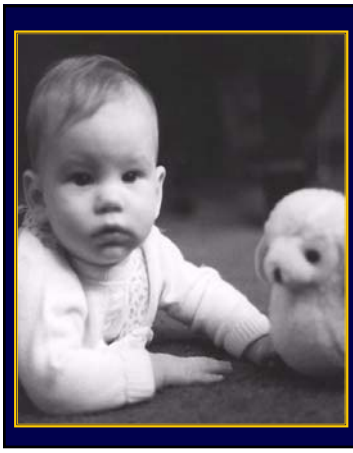
Sequential Sensory Processing

- All sensory input from the outside world first enters the brain at level of the brainstem or midbrain.
- The process of "matching" against the templates of previous neural patterns begins at these levels.
- The brainstem, midbrain, and limbic systems may start "acting" on incoming information even before the it reaches the cortex.

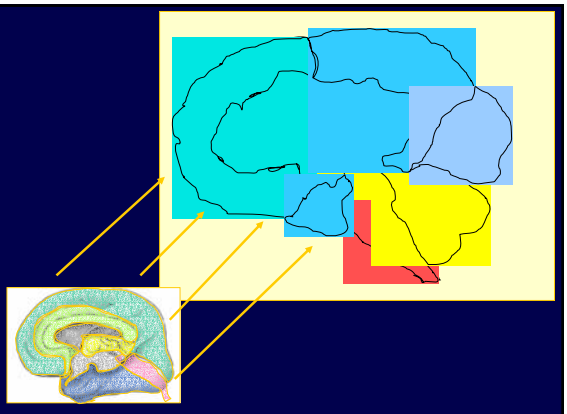








The brain develops and organizes as a reflection of developmental experience, organizing in response to the pattern, intensity and nature of sensory and perceptual experience.

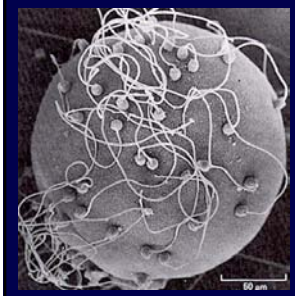


The Brain Develops

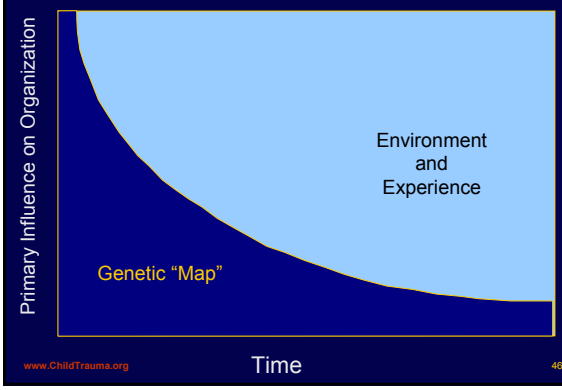
The human brain, with all of its complex structure and function, does not just "pop" into existence.

In the 9 months following conception, 100 billion neurons and 10 trillion glial cells are born. These cells organize, move, connect and specialize to create the amazing and functioning brain of the newborn.

The Transformation



Nature and Nurture



Translating Sensory Input into Patterned Neuronal Activity

- All neurons change their molecular functioning in a 'use' dependent fashion
- Therefore, patterned sensory input leads to patterned changes in neuronal systems
- Patterned neuronal changes allow the brain to make internal representations (changes) of the 'external' world

The Brain is Undeveloped at Birth

The brain changes throughout life. The majority of that change takes place in the first years of life.

At birth the remarkable potential of the brain remains unexpressed.

It is the experiences of childhood that express that potential.

Creating First Memories

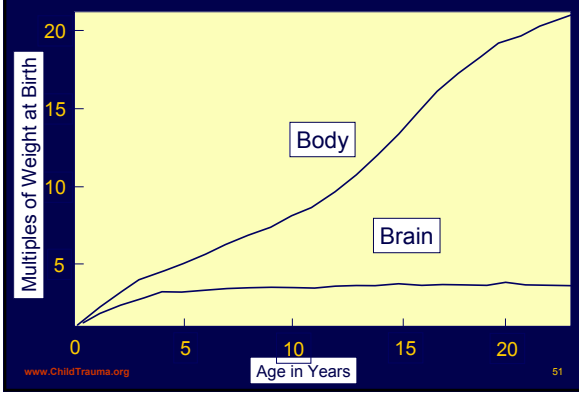
The first set of unique sensory stimuli shape neural "networks" which will "encode" and store – in neurons – the template for future sensory stimuli similar to this original sensory experience.

USE-DEPENDENT DEVELOPMENT

The more a neural system is "activated," the more that system changes to reflect that pattern of activation

This is the basis for development, memory and learning

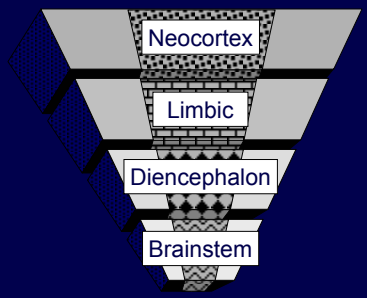
Brain Growth vs. Body Growth



Sequential Neurodevelopment

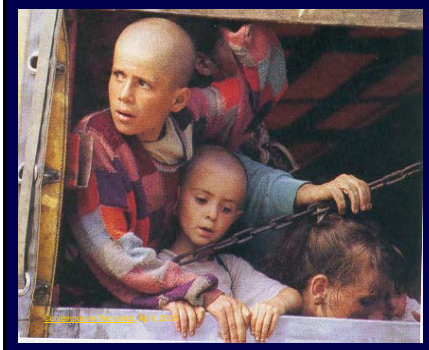
- The brain is undeveloped at birth
- The brain organizes from the "bottom" up - brainstem to cortex and from the inside out
- Organization and functional capacity of neural systems is sequential
- Experiences do not have equal "valence" throughout development

SEQUENTIAL DEVELOPMENT
Sequential Vulnerability



Neglect

- Lack of a specific sensory input during development results in abnormal development of the brain.
- The abnormal development is in those brain systems which *sense, perceive, process, "interpret",* and *"act on"* information related to that specific sensory deprivation.



Neglect

- Deprivation of critical experiences during development
- Impact varies based on onset and duration of neglect

Sensory Deprivation

Absence of sight, sound, touch, taste, smell -and meaningful combinations of these sensations

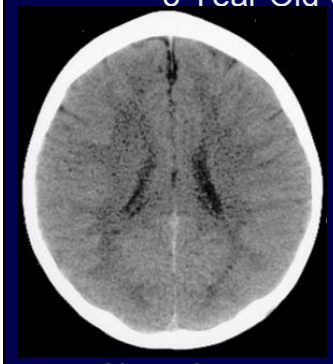
The somatosensory bath of early childhood provides the major sensory cues responsible for organizing key areas in the brain

Absent these sensory experiences, abnormal development results

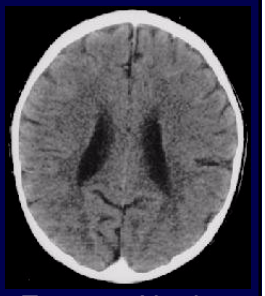
Early Childhood Neglect

Family portrait by an 8 year old boy. Adopted at age 3 from an Eastern European orphanage.

3 Year Old Children



Normal



Extreme Neglect

3 Year Old Children

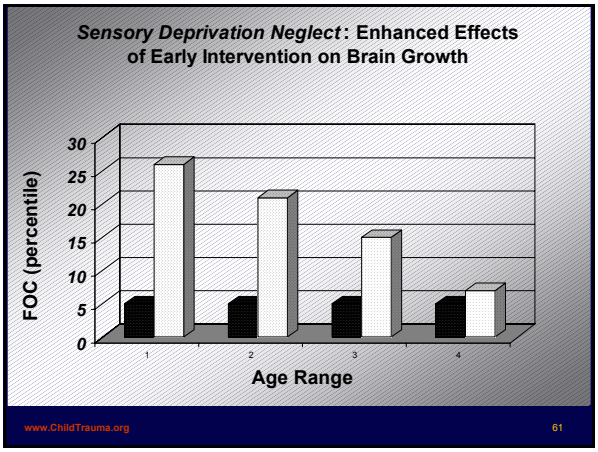
Normal

Extreme Neglect

3 Year Old Children

Normal

Extreme Neglect



Bonding, Attachment and Social Communication

Somatosensory Bath

- Touch, taste, sight, smell, sound and movement in the caregiver-infant interaction
- These primary sensations play a major role in providing the patterned, repetitive sensory stimulation and experiences that help organize the child's developing brain

What is Attachment?

- Special enduring form of "emotional" relationship with a specific person
- Involves soothing, comfort and pleasure
- Loss or threat of loss of the specific person evokes distress
- The child finds security and safety in context of this relationship

ANTECEDENTS OF "HEALTHY ATTACHMENT"

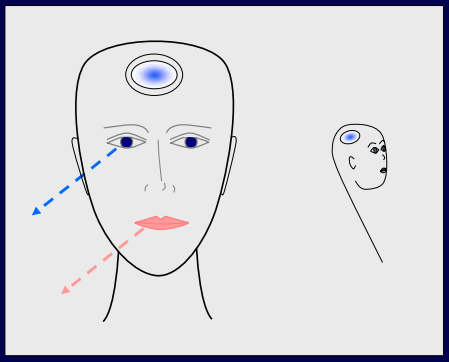
"Optimal" Caregiving in the First Year of Life

Positive, Harmonious, Responsive, and Predictable

Attentive, responsive and nurturing caregiving helps the infant build the neurobiological foundations for a healthy and adaptive stress response

Bonding Behaviors Decrease when the Caregiver is in Distress

With increasing threat and distress, an individual's capacity to "give" to others is diminished.



The Positive Impact of Touch and Affection

26 pounds

4 years old

36 pounds

4 years old

Early Childhood Neglect

Family portrait by a 14 year old boy. Neglected by caregiver during first 18 months of life.

The compartmentalization of Western life

Separate by age

Separate by wealth

Separate by work

Separate in education, by profession

Separate by transportation

Separate by generation

Separate by ethnicity, religion, race

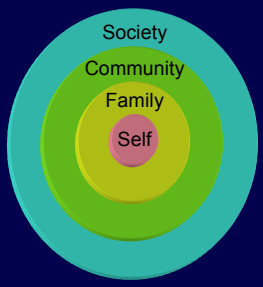
What if the breadth and depth of relationships in childhood is minimal?

Human beings are social creatures. We develop and use socio-emotional "language" in all activities.

Sphere of Concern

- The group of others to which an individual is “attached” or for whom one is “concerned.”
- This typically includes family, friends and community
- Sphere of concern also has a temporal axis - concern about the future - the future of your children, the community - “future generations.”
- When threatened or in a resource-depleted situation, sphere of concern shrinks.

Sphere of Concern



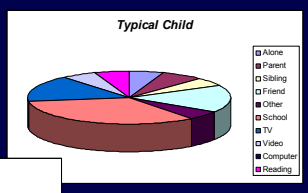
Sphere of Concern helps weave Social Fabric

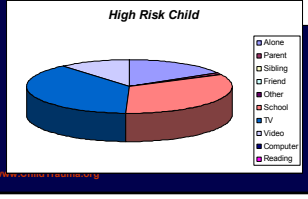
Any group – family, organization, community - with self-absorbed and selfish members only will ultimately dissolve.

Sphere of Concern Contracts With Distress

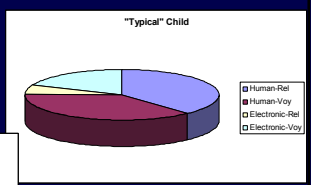
With increasing external stimuli, challenges and distress, an individual’s capacity to “give” to others is diminished.

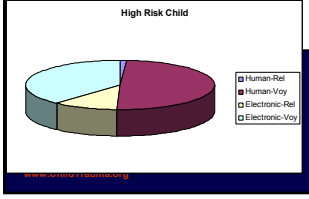
How Children Spend Their Time



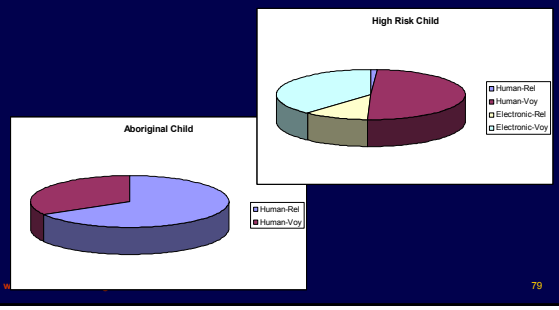


How Children Spend Their Time



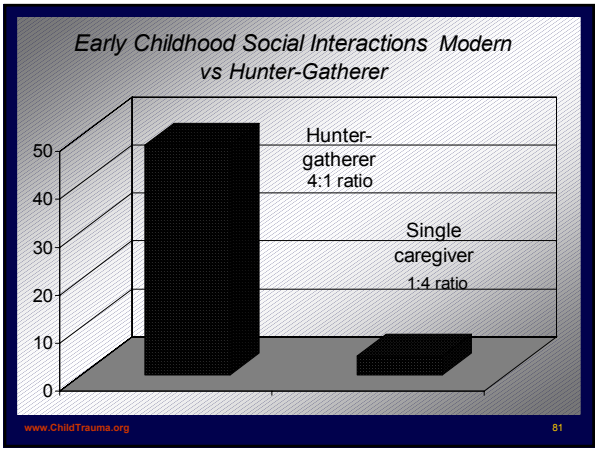


Use-dependent Development of Capacity for Relationships



What are We Doing ?

- There has never been a time in the history of humankind that we have asked a single adult to provide the ongoing and continuous needs of multiple children with so little support.
- Increasing isolation, decreasing resources and electronic caregiving combine to make it more difficult for families to provide optimizing experiences for children.

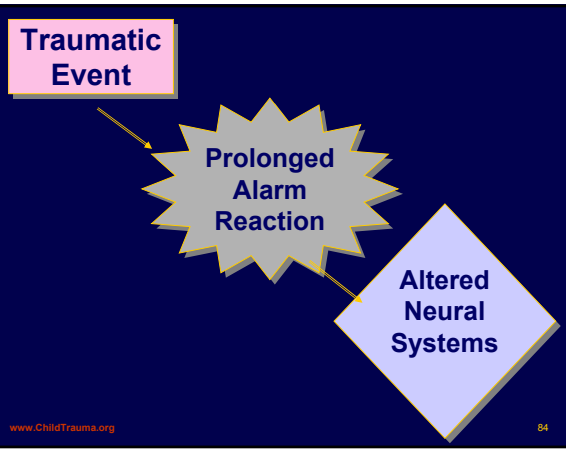


Are we losing social capital?

Is the social fabric in our communities thin and weak like muslin? Or strong as canvas?

The Whole Curve is Shifting

- 47 % of young adults voted in the Presidential election in 1972, 27 % in 1996 and only 22 % in 2000
- 50 % of young adults volunteered in 1972; 26 % in 1996
- 80 % of young adults in 1972 came from intact families; 61 % in 1996
- 50 % of live births in 1998 were to a single mothers



The Brain Does Not Like Surprises

- All novel stimuli activate “attention”.
- Novel stimuli, until proven otherwise, are categorized as potentially-threatening.
- New situations, new faces, new places - even when “fun” - activate a low-level stress response.

Angry Dad

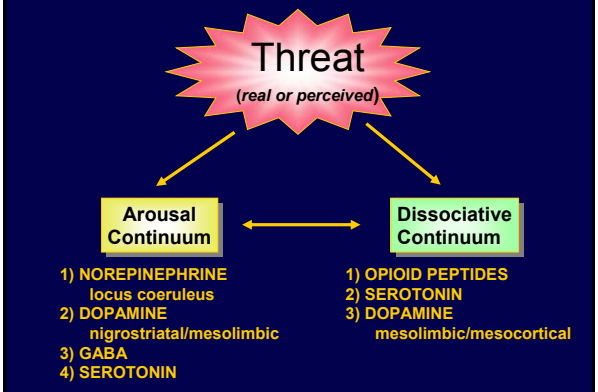
This drawing is by a three year old boy living with domestic violence. This drawing is what happens when Dad comes home. The father is the big image, the boy is the smaller image.

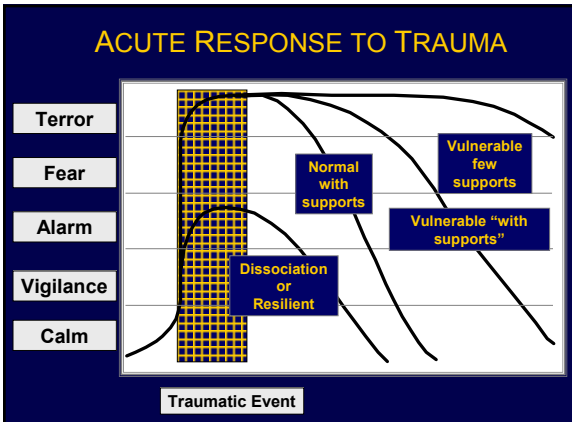
Heterogeneous Threat Responses

Hyperarousal	Dissociative
• Classic “fight/flight”	• Endogenous opioids
• Noradrenergic - locus coeruleus	• Increased vagal activity and decreased heart rate
• Increased heart rate	• Younger children, females, inescapable or painful trauma
• Older children and males, participatory trauma	

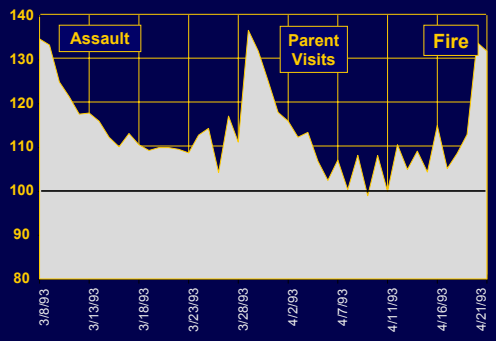
Response to Threat

- **Dissociation**
  - Disengage outside
  - Numb
  - Compliant
  - Suspension of time
  - De-realization
  - ‘Mini-psychoses’
  - Fainting
- **Hyperarousal**
  - Hypervigilance
  - Reactive
  - Alarm response
  - Tachycardia
  - Freeze: Fear
  - Flight: Panic
  - Fight: Terror

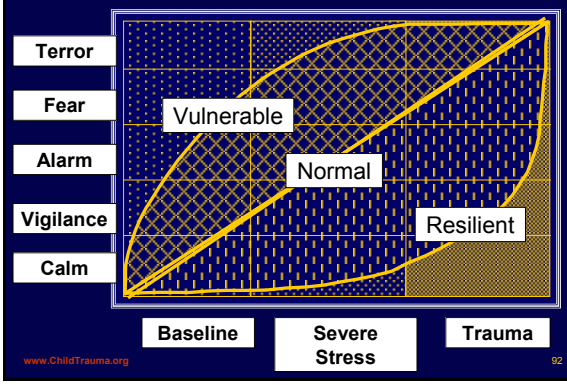




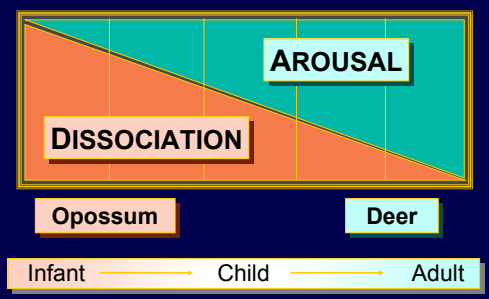
Resting Heart Rates: Branch Davidian Children



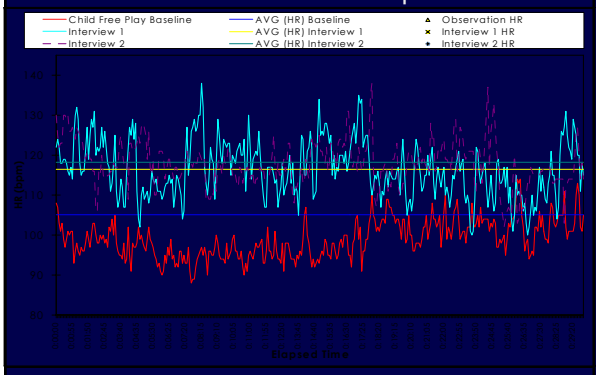
DIFFERENTIAL "STATE" REACTIVITY



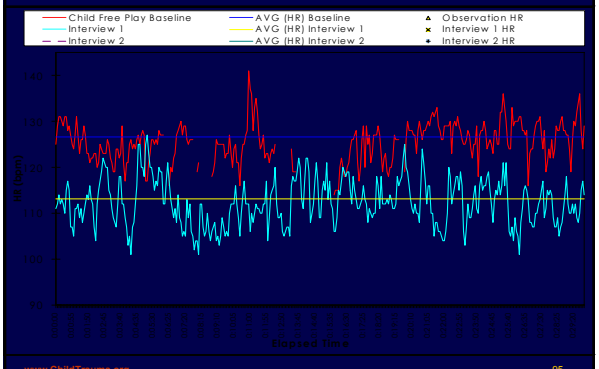
ADAPTIVE MODES



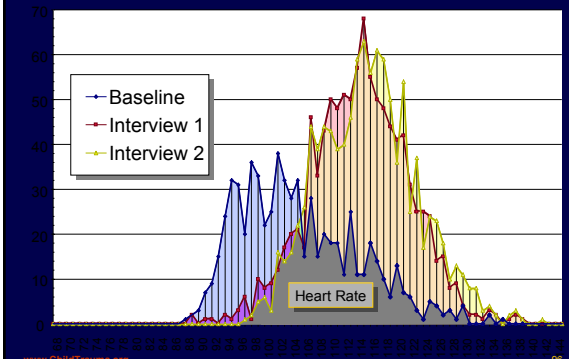
HYPERAROUSAL Response



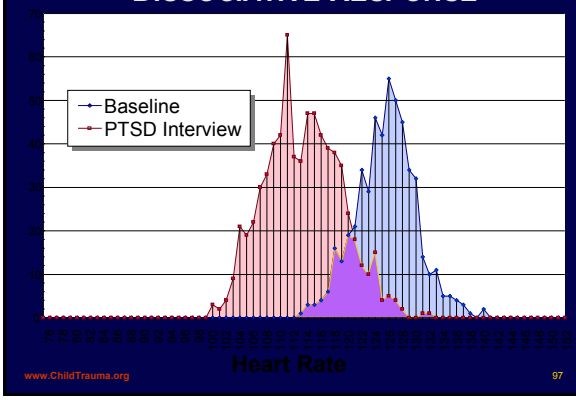
DISSOCIATIVE Response

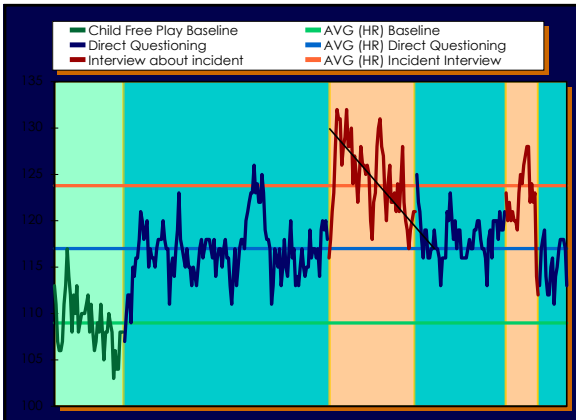


HYPERAROUSAL RESPONSE



DISSOCIATIVE RESPONSE





States become Traits

- Persisting activation of the neurophysiology of threat "re-sets" homeostats
- Persisting hyperarousal = altered noradrenergic systems
- Persisting dissociation = altered opioid and dopaminergic systems

DISSOCIATIVE/AROUSAL BALANCE

Dissociation	>	Arousal
Females	>	Males
Young Children	>	Older Children
Torture/Pain	>	Observer
Inescapable Helplessness	>	Action Active Role

Primary Dissociative Responses Following Childhood Trauma

- typically observe normal or low resting HR
- when presented with evocative cues related to trauma, an initial increase in HR observed
- if not unable to distract, avoid, or 'tune out' these cues, a plateau and then decrease in HR is observed

Primary Dissociative Responses Following Childhood Trauma

- Frequent work ups for absence seizures
- Cue-dependent decrease in HR may result
- in syncope (fainting)
- Frequent somatic complaints -- headaches, muscle aches, abdominal pain, constipation
- All consistent with sensitization and dysregulation of CNS opioid systems

Fear Changes the Way We Think

Sense of Time	Extended Future	Days Hours	Hours Minutes	Minutes Seconds	Loss of Sense of Time
Primary *secondary* Brain Areas	**NEOCORTEX** *Subcortex*	**SUBCORTEX** *Limbic*	**LIMBIC** *Midbrain*	**MIDBRAIN** *Brainstem*	**BRAINSTEM** *Autonomic*
Cognition	Abstract	Concrete	Emotional	Reactive	Reflexive
Mental State	CALM	**AROUSAL**	ALARM	FEAR	**TERROR**

State-Dependent 'Storage' and Recall

The brain processes, places 'value' on, stores and acts on information that is, at that moment, important to the organism

Developmental Hot Zones

Mastery is sequential

Crawl, stand, walk, run, jump, hop, skip

Suck, bite, chew, swallow - *be fed feed yourself, feed others*

Developmental Comfort Zone

- Developmental skills in physical, emotional, behavioral, social and cognitive domains that have been mastered
- Familiar, safe and "well-known"

Developmental Hot Zone

- The set of physical, emotional, social and cognitive capacities that are actively being "learned"
- These capacities are "potential" – they are possible due to previous developmental achievements but have yet to be mastered

Developmental Cold Zone

- Impossible demands and challenges
- Mismatch between current developmental capacity
- Too much time in these situations "freezes" enthusiasm, curiosity and developmental progress

Multiple Ages

- Chronological
- Physical/Motor
  - Emotional
  - Behavioral
  - Cognitive
    - Social
    - Moral

Principles of Therapeutics

- Work where the child is -
- Chronological age may not match the emotional, cognitive or social 'age'
- Emotional, cognitive and social 'age' are context and state-dependent
- Remember -- parts of the brain that are not being 'used' do not change

Principles of Assessment

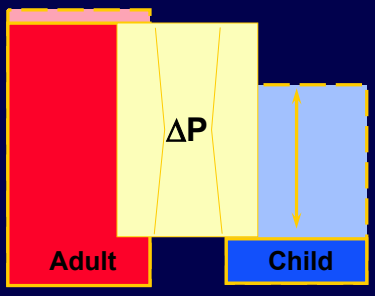
- Identify strengths and weaknesses in various domains
  - Physical/medical
  - History of life events
  - Family/social
  - Emotional/behavioral
  - Cognitive/academic

Principles of Assessment

- Develop treatment plan with clear objectives
- Target specific areas and quantify symptoms
- Re-evaluate on a periodic basis -- is our intervention helping ?
- Involve family, school and community supports to create a therapeutic 'web'

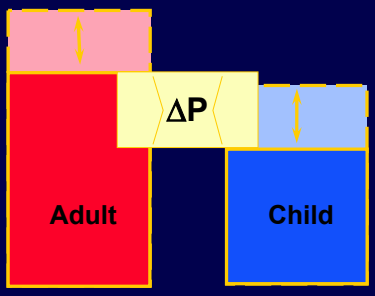
The Power Differential

- All human interactions have continuous judgment of vulnerability
- Neural mechanisms that function independently (e.g., upward gaze, size)
- Judgment about friend or foe, help or hurt
- Strong group endorsement cues (e.g., uniforms)



Intimacy, Trust and Disclosure

- Graded process
- Not an "event" – disclosure is a process
- Frequently "two steps forward, one step back"
- Children (and adults) "fish" for safe responses prior to intimate revelations
- Trust is the key to intimacy and disclosure
- Safety is the key to trust – children remaining in threatening environments rarely freely disclose to strangers



Face Recognition

- Known and safe versus unknown and threat
- Neurobiological factors in recognition
- Capacity to cue on minor 'non-similar' features, e.g. Down's Syndrome
- Limit to number of 'known/safe' features
- Basis for racism ?

Face Recognition
Clinical Implications

- New faces activate an alarm/threat response
- This response inhibits the sense of safety
- Sense of safety is required for disclosure
- Sense of safety is required for access to cortically-stored narrative
- Sense of safety is required for therapeutic work

Make Yourself Familiar

- Give the child multiple opportunities to see your face
- Give the child elements of predictability and control
- Multiple contacts are good – multiple "interviews" are not
- Spontaneous and accurate disclosure is related to developed trust

The Interaction

- Remember to use age-reasonable choices for the child to feel some control
- Work within your personality and comfort level – don't try to interview like someone else on a videotape
- The child's comfort will mirror your comfort
- Your confidence will increase the child's sense of safety

Adaptive Response	Rest *(Adult Male)*	Vigilance	Freeze	Flight	Fight
Hyperarousal Continuum	Rest *(Male Child)*	Vigilance	Resistance	Defiance	Aggression
Dissociative Continuum	Rest *(Female Child)*	Avoidance	Compliance	Dissociation	Fainting
Primary *secondary* Brain Areas	**NEOCORTEX** *Subcortex*	**SUBCORTEX** *Limbic*	LIMBIC *Midbrain*	MIDBRAIN *Brainstem*	**BRAINSTEM** *Autonomic*
Cognition	Abstract	Concrete	Emotional	Reactive	Reflex
Mental State	**CALM**	**AROUSAL**	**ALARM**	**FEAR**	**TERROR**

State-dependent Learning

- The internal state of a child helps determine what they will perceive and "learn"
- A hungry, exhausted, ill or anxious child does not learn well
- In distress, children seek familiarity in their comfort zone

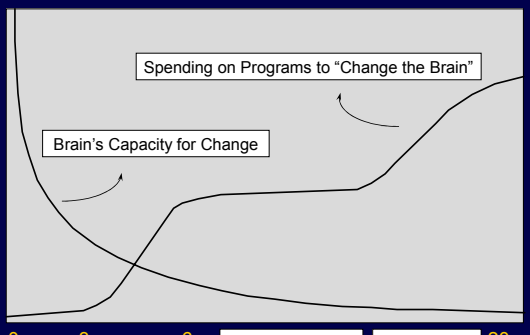
Stage-dependent Learning

- What a child "learns" in any experience is dependent upon their stage of development
- The infant, toddler and adolescent will perceive and store different information from the same experience
- Learning – physical, emotional, social and cognitive – is always related to stage of development

Know the Stage and Watch the State

- Effective adult interactions to teach, enrich or heal young children comes when the developmental stage and present state of the child are respected
- Attunement becomes the key
- Core principles of development should be central educational objective for caregivers and educators of young children

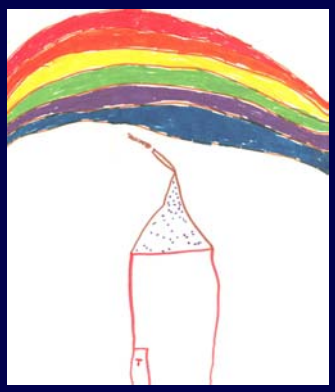
Social-Environmental Pressures	***Resource-surplus Predictable Stable/Safe***	***Resource-limited Unpredictable Novel***	***Resource-poor Inconsistent Threatening***
Prevailing Cognitive Style	Abstract Creative	Concrete Superstitious	Reactive Regressive
Prevailing Affective 'Tone'	CALM	ANXIETY	TERROR
Systemic Solutions	INNOVATIVE	SIMPLISTIC	REACTIONARY
Focus of Solution	FUTURE	Immediate FUTURE	PRESENT
Rules, Regulations and Laws	Abstract Conceptual	Superstitious Intrusive	Restrictive Punitive
Childrearing Practices	Nurturing Flexible Enriching	Ambivalent Obsessive Controlling	Apathetic Oppressive Harsh

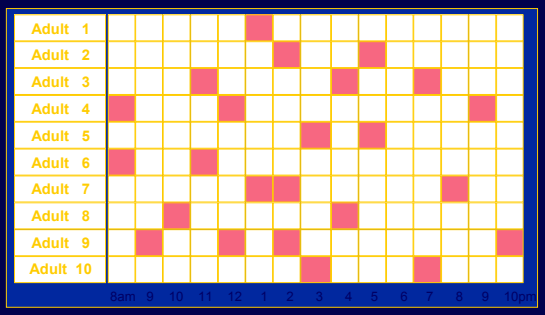


How can we improve practice?

Branch Davidian Child (1995)

A five year old girl who survived the ATF raid on Ranch Apocalypse.When asked to draw her home. The dots in the room are from bullets.





The Therapeutic Web

- The other people in a child's life can provide more healing, educational, enriching and positive experiences than a therapist.
- These people, however, need insights, support, knowledge and reinforcement.
- Work to identify the people in this web - and provide them with the tools to understand and help the child.

Psychoeducation

- Teach the child about the stress responses
- Information creates the cognitive framework for the child's self-understanding
- Help create positive and accurate 'scripts' about traumatic events
- Don't let children create or maintain 'false' narratives

Structured Environments

- Physical spaces make a difference
- Create 'personal' spaces and places
- If possible, avoid unpredictable and "adult-style" changes in daily routine
- Structure must reflect developmental stage
- Infancy - highly structured (make your schedule conform to the infant's) - this will build into the child the necessary capacity to tolerate change

Predictable Environments

- Consistent emotional responses from caregivers
- Familiar places, people and things
- Routines for feeding, bathing, homework, school, sleep
- Discipline - clear expectations with consensual rewards and consequences
- No angry, reactive or punitive punishment

Enriched Environments

- Sights, sounds, smells, tastes and touch
- Timing and attunement is crucial
- Let the child EXPLORE - discovery teaches better than passive absorption

Enriched Environments

- Face-to-face, eye contact, social communication (conversation, expressions)
- Narrate, explain, think out loud, model
- Let child have quiet, integrating time - and sleep

Nurturing Environments

- Multiple invested adults
- Responsive and "in tune" with the infant or child's needs and wants
- Rich in positive emotional and physical stimulation
- To the infant, LOVE is behavior - gentle, repetitive touch, smiles, coos, rocking

Epiphany Reactions

- Single negative or traumatic events can change the brain and the person
- Single positive experiences appear to be capable of similar transformation
- More is known about the pathological impact of trauma than positive experiences
- Many religions and cultures describe, indeed, prescribe methods for epiphany (e.g., fasting, meditation, ritual, chanting, prayer)

Belief System

- *Beliefs systems can protect* - children with strong cultural or religious connections tolerate stressors and trauma better.
- *Belief systems can destroy* - children can be raised with, or develop destructive beliefs. "God punishes me because I am bad."
- Belief systems appear to be integral to healing.

Resonance of Parenting

- Each caretaker has developmental stages in which they are better at parenting
- Each caretaker has developmental stages during which they are less effective
- Typically, these match -- or resonate -- with the parents own experiences

The Caregiving Match

- In any relationship with the child, the match between the caregiver's (or therapist's) interaction and the child's present internal state (developmental stage) is crucial
- This internal state is fluctuant and is not necessarily linked to chronological age
- Mismatch leads to misunderstanding

The Power of Proximity

- Affiliation bond is related to the time spent with any individual or group
- The larger the group the weaker the attachments
- People will 'cluster' - forming sub-groups
- *Birds of a feather* - individuals in a group become more like the rest of the group
- Individuals frequently feel inhibited from expressing opposing views

The Power of Proximity

The more time you spend with any child, family, colleague or system, the more influence you will have.

People in distress do not process information efficiently or accurately.

Be patient. Repeat important information multiple times. Reinforce key points with simple written materials.

Remember the power of non-verbal communication.

Predictable, consistent, respectful and empathic interactions make the biggest difference.

145

Never underestimate the power of a single interaction.

We will often not see the results of a simple kindness or genuine human interaction. Yet these can be important throughout a child's life.

146

Work where the child is!

When we mismatch the child's level of development or current "state" we lose our capacity to effect positive change.

147

Be realistic and patient.

People do change. Yet change can be agonizingly slow. Our current systems tend to have episodic, brief contact with high-risk children. Change in the child and family may not be seen during this time, yet the contact, support, information and interactions are often making a difference.

148

Self correct!

Take time to evaluate how you do your work. Is it the most effective way to help? Are there ways to improve?

149

Self Protect!

Be aware of secondary trauma and burnout. Learn how to read yourself and take steps to rest, heal and protect yourself. The healthier you are, the more effective you will be.

150

ChildTrauma Web Site

www.ChildTrauma.org

Online Education

www.ChildTraumaAcademy.com

Scholastic, Inc.

www.Scholastic.com/bruceperry

www.scholastic.com/keepthecool